

REMARKS

I. Introduction

In view of the above amendments and the following remarks, reconsideration of the rejections contained in the Office Action of October 6, 2008 is respectfully requested.

By this amendment claims 1-5 have been amended, claims 6-19 have been canceled without prejudice or disclaimer to the subject matter contained therein, and claims 20-24 have been added. Claims 1-5 and 20-24 are now pending in the application. No new matter has been added by these amendments.

The specification has been reviewed and revised. Due to the number of revisions, the amendments to the specification have been incorporated into the attached substitute specification. For the Examiner's benefit, a marked-up copy of the specification and abstract indicating the changes made thereto is also enclosed. No new matter has been added by these revisions. Entry of the substitute specification is thus respectfully requested.

II. 35 U.S.C. § 112

Claims 1-5 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for including the allegedly unclear limitation "can be moved." The claims have been amended to remove this limitation; withdrawal of this rejection is respectfully requested.

III. Prior Art Rejections

Currently, claims 1-3 and 5 stand rejected under 35 U.S.C. § 102(b) as being unpatentable

over Takahashi (US 4,747,928) and claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahashi et al. in view of Gauger (US 3,620,956)

Claim 1 is patentable over Takahashi et al. and Gauger, whether taken alone or in combination, for the following reasons. Claim 1 requires a combinatorial deposition method of forming a film on a substrate disposed in a vacuum, the method comprising providing a plurality of substrates simultaneously in a vacuum chamber so as to perform a single vacuum evacuation process; moving the plurality of substrates sequentially to a deposition position such that a substrate of said plurality of substrates is in the deposition position while a remainder of substrates of the plurality of substrates are in a cooling position; heating and subjecting to deposition the substrate in the deposition position such that the substrate in the deposition position is heated to a prescribed temperature while being subjected to deposition; cooling the remainder of substrates in the cooling position to a temperature at which the remainder of substrates are not influenced by the heating of the substrate in the deposition position, wherein the prescribed temperature is different among the plurality of substrates sequentially moved to the deposition position and heated.

Takahashi et al. disclose a substrate processing apparatus comprising four vacuum chambers (See fig. 1; 10, 20, 30, and 40), including a sputtering chamber which has a heating stage (E), followed by a first film forming stage (F), followed by a cooling stage (G). No disclosure could be found in Takahashi et al. of two or more substrates simultaneously being in the same vacuum chamber, as such Takahashi et al. cannot meet all the requirements of claim 1. Takahashi et al. also fails to disclose a deposition position in which a substrate is heated while

being subjected to deposition; conversely, figure 2 of Takahashi et al. depicts a heating position (E) and a subsequent film forming stage (F), as such Takahashi et al. fails to meet all the requirements of claim 1. Furthermore, Takahashi et al. does not disclose cooling a remainder of the substrates which are located in a cooling position. Takahashi et al. has a cooling mechanism (200) which cools the cooling position (G); the cooling mechanism (200) reciprocates so as to contact and cool only the substrate at position (G). (Column 4, lines 14-18.) Because Takahashi et al. fails to disclose cooling a remainder of substrates, it fails to meet the requirements of claim 1. Still further, Takahashi et al. fails to disclose heating sequential substrates to different prescribed temperatures. With respect to the limitation of heating to differently prescribed temperatures, the non-final Office Action states that “the substrate temperatures are altered resulting in different deposition conditions.” The heating and cooling functions of Takahashi et al. are sequential steps which vary the temperature such that each substrate experiences different temperatures; however, Takahashi et al. does not disclose heating to different temperatures among sequential substrates. Because claim 1 has been amended to clarify that sequential substrates are heated to different temperatures, Takahashi et al. fails to meet all of the limitations of claim 1.

Gauger is cited in the Office Action for teaching a water cooling mechanism, but fails to cure the aforementioned deficiencies in Takahashi et al. As described in detail in the specification, the present invention allows a substrate to be heated and subjected to deposition in a single vacuum evacuation process while other substrates in the vacuum chamber are unaffected by the heating. In so doing, the present invention allows for greater accuracy and reduced

manufacturing time. It is thus submitted that the invention of the current application, as defined in claim 1, is not anticipated nor rendered obvious by the prior art, and yields significant advantages over the prior art. Allowance is respectfully requested.

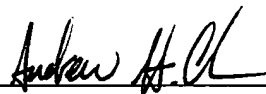
Claims 2-5 and 20-24 depend, directly or indirectly, from claim 1 and are thus allowable for at least the reasons set forth above in support of claim 1.

In view of the foregoing amendments and remarks, inasmuch as all of the outstanding issues have been addressed, Applicants respectfully submit that the present application is in complete condition for issuance of a formal Notice of Allowance, and action to such effect is earnestly solicited.

Should any issues remain after consideration of the within response, however, the Examiner is invited to telephone the undersigned at his convenience. If any fee beyond that submitted herewith, or extension of time is required to obtain entry of this Amendment, the undersigned hereby petitions the Commissioner to grant any necessary time extension and authorizes charging Deposit Account 23-0975 for any such fee not submitted herewith.

Respectfully submitted,

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